

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 03 JAN 2005



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Applicant's or agent's file reference PCT-25461	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IT 03/00581	International filing date (day/month/year) 29.09.2003	Priority date (day/month/year) 04.10.2002
International Patent Classification (IPC) or both national classification and IPC B30B9/06		
Applicant LA GIOIA, Antonio		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 7 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of 4 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  18.02.2004	Date of completion of this report  03.01.2005
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Belibel, C  Telephone No. +31 70 340-3215  

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EXAMINATION REPORT**

International application No. **PCT/IT 03/00581**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-13 received on 18.10.2004 with letter of 12.10.2004

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-13
	No: Claims	
Inventive step (IS)	Yes: Claims	2,3
	No: Claims	1,4-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: US-B-6 298 576 (LA GIOIA ANTONIO) 9 October 2001 (2001-10-09)

D2: FR-A-2 701 664 (ENITIAA) 26 August 1994 (1994-08-26)

D3: US-A-3 559 566 (LARSSON LARS-INGVAR ET AL) 2 February 1971 (1971-02-02)

- 2.1 Document **D1**, which is considered to represent the most relevant state of the art, discloses a cage drying-compacting apparatus for wastes from which the subject-matter of claim 1 differs in that it provides further heat sources, provided inside the cage drying-compacting apparatus, all along its length, said sources being comprised of at least one tube which the thermal carrier fluid runs through, means for inlet of the material to be subjected to treatment, in a position close to one of the two ends of the apparatus, and means for collecting the material subjected to the treatment, in correspondence of the opposed end.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 2.2 The subject-matter of dependent claims 2-11 is therefore also new (Article 33(2) PCT).

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

- 3.2 The document **D1** is regarded as being the closest prior art to the subject-matter of claim 1 and discloses (the references in parentheses applying to this document): a cage drying-compacting apparatus for wastes, comprising a cylindrical body (10) and at least a pair of pressure plates (14), said cylindrical body (10) being comprised of heating longitudinal tubes (11), coursed by a thermal carrier fluid, provided along the generatrixes of the cylinder(10) and spaced each other, in such a way to realise

longitudinal slots for outlet of vapour but not for outlet of material, coupled by constraint hinge means, positioned at a given distance between centres, and said pressure plates (14) being placed opposed to each other, operating as movable basis of said cylindrical body (10) and acting as pressing pistons, steam generated by the heating step of said wastes being discharged through the longitudinal slots between said heating tubes (11).

- 3.3 The subject-matter of claim 1 therefore differs from this known cage drying-compacting apparatus in that: it provides further heat sources, provided inside the cage drying-compacting apparatus, all along its length, said sources being comprised of at least one tube which the thermal carrier fluid runs through, means for inlet of the material to be subjected to treatment, in a position close to one of the two ends of the apparatus, and means for collecting the material subjected to the treatment, in correspondence of the opposed end.
- 3.4 The problem to be solved by the present invention may therefore be regarded as how to reach a uniform distribution of temperature in the product within a short time (see application, page 3, lines 24-26).
- 3.5 The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: these features have already been employed for the same purpose in a similar drying-compacting apparatus (see document **D2**; page 8, lines 28-35; page 9, lines 4-10; page 9, line 37 - page 9, line 4; figure). It would be obvious to the person skilled in the art, namely when the same result is to be achieved, to apply these features with corresponding effect to a drying-compacting apparatus according to document **D1**, thereby arriving at a drying-compacting apparatus according to claim 1.
- 3.6 A similar argumentation concerning the inventive step could be done using the combination of document **D1** and **D3**.
4. The combination of the features of dependent claims **2 and 3** is neither known from, nor rendered obvious by, the available prior art.

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- 4.1 The subject-matter of claims **2 and 3** therefore differs from this known cage drying-compacting apparatus in that: further heat sources comprise a plurality of tubes coursed by thermal carrier fluid and placed aligned, spaced each other, in such a way to divide the inner volume of the cylindrical body into sections connected each other, for each section being provided a pair of opposed pressure plates, shaped on the basis of the shape of each section.
- 4.2 The problem to be solved by the present invention may therefore be regarded as how to reach a uniform distribution of temperature in the product within a short time (see application, page 3, lines 24-26).
- 4.3 Since the features differing from D1 are neither disclosed nor suggested by any of the cited prior art documents the subject-matter of claims **2 and 3** of the present application can be considered as involving an inventive step (Article 33(3) PCT).
5. Dependent claims **4-11** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, see documents D1 and D2 and the corresponding passages cited in the search report.
- 6.1 The application does not meet the requirements of Article 6 PCT, because claim **12** is not clear. The terms "lower death end" used in claim **12** has no well-recognised meaning and leave the reader in doubt as to the meaning of the technical feature to which they refers, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.
- 6.2 Claim **12** contains all the subject-matter of claim **1** with an addition of process steps. The subject-matter of claim **1** is new. Therefore the subject-matter of claim **12** is new.
- 6.3 The subject-matter of dependent claim **13** is therefore also new (Article 33(2) PCT).

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7. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 12 does not involve an inventive step in the sense of Article 33(3) PCT. A similar argumentation as the one found in paragraphs 3.2-3.5 can be used to demonstrate it because the process steps are already disclosed in document D2, see claims 1, 2, 4, 6-9, 13-15, 19; page 8, lines 28-35; page 9, lines 4-10; page 9, line 37 - page 9, line 4; figure.
8. There is a typing error. In claim 13, "according to claim 11" should be "according to claim 12".
9. Dependent claim 13 does not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, because the features are known from the combination of the documents D1 and D3.
10. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D2 and D3 is not mentioned in the description, nor are these documents identified therein.